

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

Claims 1-36 (canceled).

1 37. (Previously presented) A method for artificially ageing a catalyst device
2 for use on a catalyst test bench for converting exhaust gases comprising at least one constituent
3 from the group consisting of C-, HC- and NO_x-containing constituents, in which method hot
4 ageing gas which comprises at least one constituent from the group consisting of C-, HC- and
5 NO_x-containing constituents is allowed for flow through the catalyst device, the hot ageing gas
6 being passed through a catalyst device which is for use on a catalyst test bench and is suitable for
7 the conversion of exhaust gases comprising C-, HC- and/or NO_x-containing constituents,
8 characterized in that gas which emerges from the catalyst device is partially admixed with the
9 ageing gas to be fed to the catalyst device, in order to be recirculated.

1 38. (Currently amended) The method of claim 37, characterized in that the
2 hot ageing gas used is an exhaust gas generated by combustion of a C-containing fuel.

1 39. (Previously presented) The method as claimed in claim 38, characterized
2 in that the hot exhaust gas is generated in a burner by combustion with combustion air.

1 40. (Previously presented) The method as claimed in claim 38, characterized
2 in that the hot exhaust gas is generated in a gas turbine.

1 41. (Previously presented) The method as claimed in claim 37, characterized
2 in that the hot ageing gas is passed through the catalyst device by means of a blower.

1 42. (Previously presented) The method as claimed in claim 37, characterized
2 in that the ageing gas is introduced into the catalyst device at a temperature of > 250°C.

1 43. (Previously presented) The method as claimed in claim 42, characterized
2 in that the ageing gas is introduced into the catalyst device at a temperature of $> 700^{\circ}\text{C}$.

1 44. (Previously presented) The method as claimed in claim 43, characterized
2 in that the ageing gas is introduced into the catalyst device at a temperature of from
3 approximately 1000°C to approximately 1250°C .

1 45. (Previously presented) The method as claimed in claim 39, characterized
2 in that the hot exhaust gas is generated during combustion operation with $\lambda > 1$.

1 46. (Previously presented) The method as claimed in claim 45, characterized
2 in that the hot exhaust gas is generated during combustion operation with $\lambda > 1.5$.

1 47. (Previously presented) The method as claimed in claim 38, characterized
2 in that the fuel used is a combustible C-containing fluid selected from the group consisting of
3 gaseous and liquid fluids.

1 48. (Previously presented) The method as claimed in claim 47, characterized
2 in that the fuel used is low sulfur fuel.

1 49. (Currently amended) The method as claimed in claim 48, characterized in
2 that a fuel with a sulfur content of $> \leq 10$ ppm is used.

1 50. (Currently amended) The method as claimed in claim 49, characterized in
2 that a fuel with a sulfur content of $> \leq 5$ ppm is used.

1 51. (Previously presented) The method as claimed in claim 38, characterized
2 in that the ratio of fuel to combustion air is varied in predetermined cycles.

1 52. (Previously presented) The method as claimed in claim 51, characterized
2 in that the catalyst device is subjected to different ageing gas compositions and ageing gas
3 temperatures corresponding to a combined load cycle.

1 53. (Previously presented) The method as claimed in claim 52, characterized
2 in that the catalyst device is subjected to load corresponding to mixed vehicle operation.

1 54. (Previously presented) The method as claimed in claim 37, characterized
2 in that the catalyst device is subjected a number of times, in each case after an ageing step, to a
3 diagnosis, in which the amplitude ratio of a post-cat sensor as a measure of the oxygen storage
4 capacity is compared with a model, the model being matched to a relevant limit catalyst and a
5 limit value being determined from the amplitude ratio between the current signal of the post-cat
6 sensor compared to the modeled post-cat sensor signal, the post-cat sensor signal being taken as
7 a measure of the oxygen storage capacity of the catalyst device.

1 55. (Previously presented) The method as claimed in claim 37, characterized
2 in that the ageing gas fed to the catalyst device is cooled.

1 56. (Previously presented) The method as claimed in claim 55, characterized
2 in that the ageing gas fed to the catalyst device is cooled by gas emerging from the catalyst
3 device.

1 57. (Previously presented) The method as claimed in claim 56, characterized
2 in that gas emerging from the catalyst device is admixed in cooled form with the ageing gas that
3 is to be fed to the catalyst device.

1 58. (Previously presented) The method as claimed in claim 37, characterized
2 in that the temperature of the ageing gas fed to the catalyst device is varied by cooling
3 independently of the setting of lambda during generation of the ageing gas.

1 59. (Previously presented) The method as claimed in claim 37, characterized
2 in that at least one component is admixed to the hot ageing gas in order to set a defined
3 composition of the ageing gas.

1 60. (Previously presented) The method as claimed in claim 59, characterized
2 in that at least one component selected from the group consisting of C- and HC-containing gas
3 constituents is admixed.

1 61. (Previously presented) The method as claimed in claim 37, characterized
2 in that the ageing gas is generated synthetically.

1 62. (Previously presented) The method as claimed in claim 37, characterized
2 in that a catalyst device selected from the group consisting of a 3-way catalyst, an NO_x catalyst,
3 an oxidation catalyst, a reformer for reducing agent and a reformer for fuel cells is aged using the
4 ageing gas.

1 63. (Previously presented) An apparatus for artificially ageing a catalyst
2 device for use on a catalyst test bench for converting exhaust gases comprising at least one
3 constituent from the group consisting of C-, HC- and NO_x-containing constituents, in which a
4 device for generating a hot ageing gas and a device for passing the hot ageing gas through the
5 catalyst device are provided, characterized in that a device for partial recirculation of gas
6 emerging from the catalyst device to the ageing gas is provided.

1 64. (Previously presented) The apparatus as claimed in claim 63,
2 characterized in that the device for generating a hot ageing gas is a device for combustion of a C-
3 containing fuel with combustion air.

1 65. (Previously presented) The apparatus as claimed in claim 64, characterized
2 in that the device for passing the hot ageing gas through the catalyst device is a hot-air blower.

1 66. (Previously presented) The apparatus as claimed in claim 64,
2 characterized in that the device for passing the hot ageing gas through the catalyst device is a
3 suction jet pump.

1 67. (Previously presented) The apparatus as claimed in claim 63,
2 characterized in that a temperature sensor is provided for measuring the temperature of the
3 ageing gas that is to be fed to the catalyst device.

1 68. (Previously presented) The apparatus as claimed in claim 67, characterized
2 in that a device for controlling the temperature of the ageing gas that is to be fed to the catalyst
3 device is provided.

1 69. (Previously presented) The apparatus as claimed in claim 63,
2 characterized in that a device for cooling the ageing gas that is to be fed to the catalyst device is
3 provided.

1 70. (Previously presented) The apparatus as claimed in claim 69,
2 characterized in that the device for cooling the ageing gas that is to be fed to the catalyst device
3 comprises a device for cooling recirculated gas emerging from the catalyst device.

1 71. (Previously presented) The apparatus as claimed in claim 63,
2 characterized in that an oxygen sensor is provided at the outlet of the catalyst device for the
3 purpose of monitoring the catalyst device.

1 72. (Previously presented) The apparatus as claimed in claim 63,
2 characterized in that an oxygen sensor is provided for the purpose of monitoring the ageing gas
3 that is to be fed to the catalyst device.